GRUMMAN plane news

Vol. 38, No. 6, March 30, 1979, Bethpage, N.Y.

Mighty effort

Grummanites at Glen Arm, Maryland, continue to manufacture top quality wing skins for Boeing's 727 -- right on schedule. To date, 300 shipsets of skins have been delivered. Preparations are now underway to begin production on the recently awarded Boeing subcontract for manufacture of the new 767 airliner's center-wing section. (Photo by Harry Prodromides)

Future space work platform passes underwater tests

If thoughts of standing on a ladder to fix the roof makes you dizzy imagine making repairs to your home while it whirls in space, tens of thousands of miles above Earth. To make such repairs easier, a model of a Grumman designed and built "cherry picker" — a work platform on the end of a flexible arm — was recently tested at the Johnson Space Center in Houston.

The cherry picker will be used by Space Shuttle astronauts to make repairs on satellites, or to perform other space construction tasks. It will provide a stable work platform, carry the tools, and supply illumination while the astronaut makes his outer space service call.

Early in 1978 Grumman won a NASA contract for the study, design and manufacture of a development test article. The cherry picker tested at Houston is a preliminary design, and modifilcations will be made for the model to be delivered to NASA in January, 1980.

The cherry picker was tested over a three-day period in the Space Center's water immersion facility, which simulates weightlessness. Both Skylab astronaut Dr. Joe Kerwin and NASA engineer Jim Gimbel donned a special Space Shuttle suit and tested the cherry picker in the neutral buoyancy of the water tank.

In space the cherry picker will be fitted to the Space Shuttle's remote manipulator system, a flexible composite arm almost 50 ft. long. The arm will be maneuvered from the cherry picker itself, or from the Shuttle if necessary.

The cherry picker is made of aluminum and weighs only 300 lbs. "There's nothing very exotic about it," says Al Nathan, program manager. "It's just a very simple, very functional thing."

Basically it is a platform, approximately five ft. by six ft., with ski-binding-type slots for the astronaut's feet. There are bins for tools, flood lights for illumination and a control panel to maneuver the manipulator arm.

The development test article which will be delivered to NASA will be tested on the air bearing floor at the Space Center, which will simulate zero-gravity conditions.

The cherry picker will be the first of a series of space construction work platforms and is the simplest in design. Next year Grumman will complete design work on a closed, pressurized cherry picker to be constructed in 1981. Astronauts will be able to work in shirt sleeves in the closed cabin, using manipulator arms to do the work.

The closed cherry picker and other more sophisticated space construction work platforms will allow astronauts not only to carry out satellite servicing, maintenance and repairs, but eventually to perform large construction projects while in orbit. Complicated structures will be fabricated in space, perhaps using such equipment as the Grumman-designed beam builder which produces beams of various lengths.

Making repairs. *This artist rendering depicts one of the many ways a Space Shuttle astronaut could use the Grumman-designed and built 'cherry picker.' Here, the astronaut is fixing a satellite.*

retirees

On behalf of our fellow workers, PLANE NEWS salutes the following men and women for their contributions to the company and wishes them well in their retirement. Those who retire in March are:

Alice Frampton (25), John Oechsner (30), William Butler (3), Milton Kramer (3), Charles Koppisch (2), Anne Wiggin (2), Chester Engvaldsen (60), David Heisler (55), Eugene Nagy (55), Frank Penicaro (55), Willie Calloway (36), Francis Leuschner (35), John DiMarco (3), Margaret Glass (30), Elmer Laws (60), Justyna Nienaltowski (40), Bernard Spizuoco (2), Joseph, Accolla (43), John Aiosa (40), and John Giacobbe (2).

Summer jobs

Application forms for 1979 summer employment at Grumman are available at all Employee Services (ES) offices and in Plant 28. No applications will be accepted after Wednesday, April 18.

You're no. 1

With gasoline prices heading toward the one dollar mark, many Grummanites are considering carpooling to save money. In an effort to help people set up carpools and look for new riders for already established pools, PLANE NEWS will be giving top priority to carpool/rider wanted advertisements -- both in the ad supplement and in PLANE NEWS.

Here is a listing of the latest carpool advertisements:

CENTEREACH-LAKE GROVE: Join or form, to Plt. 40, 7:48 a.m. to 4:18 p.m., Kevin Riley, Ext. 3466 or 981-5635.

FLORAL PARK-NEW HYDE PARK: Join or form, to Plt. 15, Vic Paolantonio, Ext. 2798 or 437-6063.

LAKE GROVE: Looking to join car pool to Plt. 30, 8:12 a.m. to 4:41 p.m., Sheldon Buchwald, Ext. 7149 or 588-6364.

NORTH BABYLON: Form or join, to Plt. 3, 7:00 a.m. to 3:30 p.m., Howard Winkelman, Ext. 3389 or 667-9065.

SELDEN: To Plt. 2, 7:48 a.m. to 4:18 p.m., John Judd, Ext. 4433 or 698-5747.

SMITHTOWN: Need one more for existing car pool of three, between Smithtown commuter parking and Plt. 3, 7:00 a.m. to 3:30 p.m., Arnold Moran, Ext. 8691 or JU 4-5817.

VALLEY STREAM: To Plt. 40, Murray Rosenfeld, Ext. (115) 6410 or 872-3610.

Sign agreement with Panavia

Official visit. *At Calverton Operations, George Skurla, Chairman and President of Grumman Aerospace, talks with Dr. Carl Peter Fichtmuller (C), managing director of Panavia and Oskar Friedrich (R) of Panavia, inside the anechoic chamber.*

Grumman Aerospace signed an agreement with Panavia Aircraft GmbH on March 14 to cooperate in proposing Panavia's Tornado aircraft for an anticipated U.S. Air Force requirement for an Enhanced Tactical Fighter (ETF). The primary mission for the USAF ETF will be tactical air-to-ground night/all-weather attack for the European theater in the mid-eighties.

The initial agreement specifies responsibilities between the two companies for the early phases of the program. Details for the longer range phases are currently being worked out.

Panavia's press release stated that the trinational management company chose Grumman as its American partner over other U.S. aerospace firms for its expertise and experience in tactical airborne weapon systems, and also in the field of European cooperation.

Panavia Aircraft GmbH with partner companies Aeritalia, British Aerospace, and Messerschmitt-Bölkow-Blohm will produce a total of 809 aircraft for the German Navy and the British, West German, and Italian Air Forces in the course of the Tornado program. The first series aircraft are due for delivery to those services in 1980.

Well done!

Job well done. *Recipients of Project Sterling awards hold plaques honoring their groups (L to R): George Skurla, Chairman and President of Grumman Aerospace; Tom Rozzi, Vice President and director of Security and Personnel Services; Dick Barton, former managing director of Iran F-14 program; John Marshall, director of Field Administration and Liaison; Frank Spinos, member of last group evacuated from Iran; Ray Schubnel, president of the Amateur Radio Club, and Tom Lashinsky, manager of Traffic. (Photo by Marie Trimborn)*

Almost three months of feverish activity, working days that lasted through the night, and moments of great worry and concern were commemorated at a simple ceremony on March 16. George Skurla, Chairman and President of Grumman Aerospace, presented Project Sterling awards to five groups of people who were involved with the F-14 Iranian program and with the massive Grumman team who worked so hard to evacuate personnel for Iran during the dangerous crisis period.

In an unusual gesture by a Grumman chairman, Skurla himself had nominated the groups for the awards because of "their hard work and their dedication, from the beginning of the Iran program to the final evacuation."

Recipients of the awards were Field Administration and Liaison, the Amatuer Radio Club, the Traffic Department, the Iran group as a whole, and the self-described "Dirty Dozen," the last 12 Grumman people evacuated from Iran.

John Marshall, director of Field Administration and Liaison, accepted the award for his group. It was Marshall's office in Plant 28 that served as an operations center during the crisis period in Iran. They charted the whereabouts of every employee and dependent in Iran, answered calls from anxious relatives, served as the communications center by keeping the phone lines to Iran open as long as possible and consulted regularly with State Department members and other government officials in order to stay on top of the situation.

The people of Field Administration were joined by their colleagues throughout the company in assisting the Grumman team in Iran, arranging for their safe departure from the country and helping them settle down in the United States after their arrival. Ted Giannone, manager for International Assignments, Field Administration, described the situation during those months: "The operations center was open 24 hours a day, seven days a week. Everyone was involved. You couldn't chase people out of here."

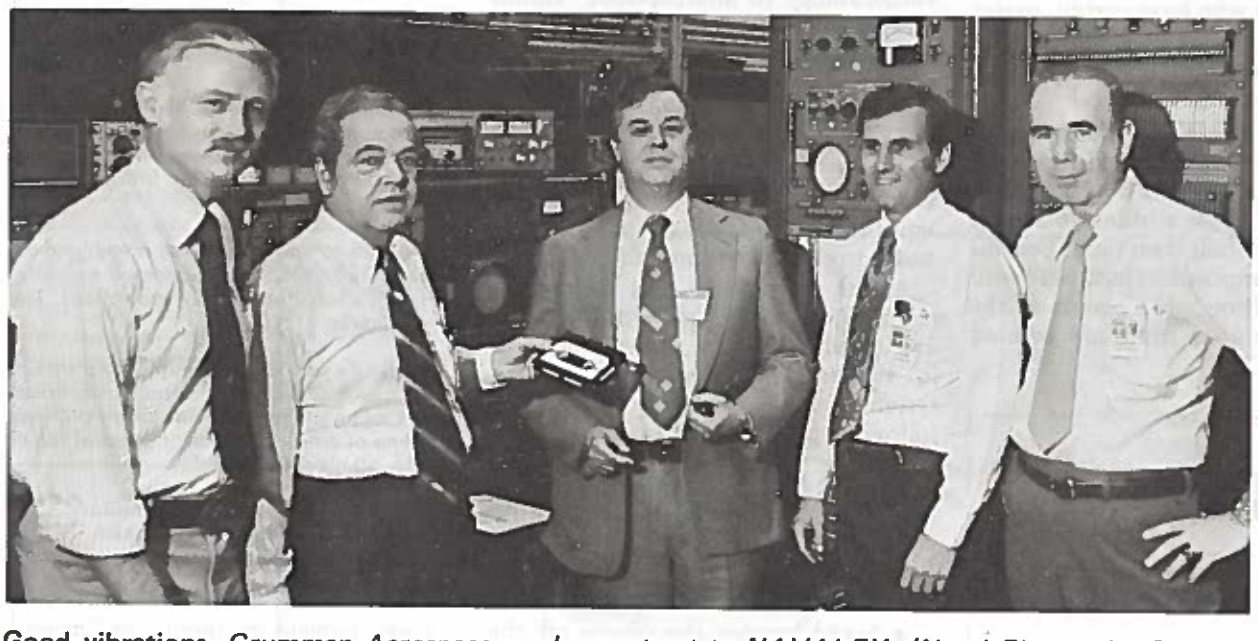
The president of the Amateur Radio Club, Ray Schubnel, received the award for the club. When telephone communications with Iran were disrupted, it was the Amateur Radio Club that took on the responsibility of keeping contact with the Grumman group in Iran. The club voluntarily manned the radio link for 24 hours a day throughout this period.

Tom Lashinsky, Traffic manager, accepted the award for his department. Traffic was responsible for the massive job of chartering airplanes to get both Grumman people and cargo out of Iran. The largest of the groups — 387 people — arrived at Calverton on December 10 on a chartered Trans International Airways DC-10. The Traffic Department worked as the focal point, along with hundreds of other Grumman employees, to arrange customs and ground support for the plane, the first large commercial airliner to land at Calverton, and to provide ground transportation, food, housing, medical care and other essential services for the returnees.

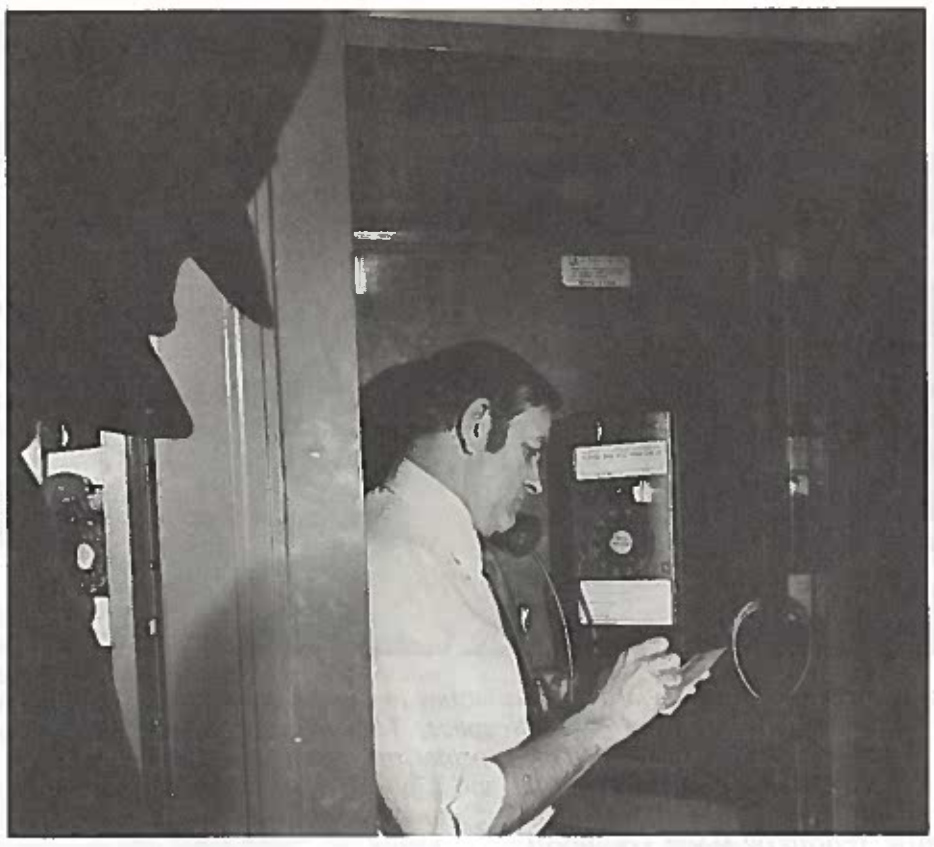
Dick Barton, managing director of the F-14 program in Iran until a year ago, received the award for the overall Grumman Iran team. Recalling the four-year history of the Iran program — Grumman's first major overseas operation — Skurla said, "We delivered the airplanes on time in quality condition. We activated the facilities on time. It was unfortunate that by the time we had the program in a good operational mode, and we had all those homes and schools built and the people settled down, time ran out on us."

Representing the "Dirty Dozen" was Frank Spinos, one of the last group of 12 evacuated from Iran. Retired Adm. L.A. "Swoose" Snead, Barton's successor, and Martin Clark, director of Field Administration in Iran, were both out of the country and could not be present to receive the award for their colleagues. The "Dirty Dozen," a group of ten men and two women, stayed behind in Isfahan to close the Grumman operation and to pack the belongings of the rest of the Grumman group who had already left. When the decision was made for the 12 to go, it meant a long overnight bus trip to Teheran. The last few miles of the journey, from the city limits to the center of Teheran, took about three hours as the bus was stopped at dozens of roadblocks by armed men. "We are glad they were able to get out when they did," said Skurla. "Perhaps they had more courage than we wanted them to have."

Skurla said that the Project Sterling awards "were a small but symbolic way to show our appreciation to the entire Grumman Iranian operation and to all those who took part in the evacuation effort." He concluded that "all's well that ends well, but there were times during the past three or four months when we weren't so sure that it all would end well."



Good vibrations. *Grumman Aerospace, under contract to NAVALEX, (Naval Electronics Systems Command) has developed an extremely economical method for detecting workmanship defects in avionic equipment. Defects of this sort are usually disclosed by using a technique known as "random vibration" --but the use of this method has always been severely limited by high facility costs. The Grumman team came up with a way to generate random vibration using an ordinary audio tape deck, a technique that could save the Department of Defense millions of dollars in equipment acquisition costs. Preliminary work for the project was begun under the aegis of the Advanced Development Department. The Navy was on hand March 19 for a successful demonstration. The ingenious new method is the brainchild of (L to R) Richard Pokallus, George Hirschberger, who is shown handling a programmed tape to Navy representative William Wallace Jr., Joe Popolo, and John Devitt. (Photo by Rich Breunig)*



Who's listening? *Though it's highly improbable that a seedy character could be standing outside a Grumman telephone booth listening in on a conversation, security of information is everybody's business at Grumman. (Photo by Rich Breunig)*

Security-wise

How to keep secret

Does Macy's tell Gimbels? Not on purpose, certainly. Important information, accidentally revealed, can have dire consequences for any company. But when the company is involved in the business of our national defense, it becomes even more urgent that information be properly protected.

Since Grumman won its first government contract in 1931, security has been every Grummanite's responsibility. However, according to Bob Amott, assistant Security manager, today's advanced electronic listening equipment is making it more difficult to protect the transmission of vital data.

Years ago, Grumman's telephones were directly connected to other contractors' and government agencies' telephones through a network of ground wires and switchboards. Those days are gone. Today is the era of microwave communications — a highly efficient system capable of handling a high volume of telephone messages, transmitted over the air waves.

At the present time, these microwave radio trunks of the Bell telephone companies cannot be transmitted into code, making the system vulnerable to simple and straightforward interception.

According to Amott, the various communications systems used at Grumman, including Telex, facsimile, voice, and automated data processing, have been surveyed for vulnerability to interception. "Initial surveys indicate that all electrical communications to and from the facility are highly vulnerable to interception of the type described," says Amott. "Further studies are underway to determine what modifications must be made to equipment and usage practices in order to eliminate that vulnerability."

Amott emphasizes that until such changes are made, all Grummanites are urged to exercise extreme caution in the use of all communications systems in accordance with the following guidelines:

- Do not discuss information over the phone before you have carefully considered the security implications of the data.

- Avoid leaving the phone off the cradle when searching for additional information. A telephone left on the desk could inadvertently pick up background conversations in your office.

- Don't use "double talk" over the phone to disguise classified information; trained intelligence analysts will not be deceived.

- Use courier, mail, and other secure message facilities as a primary means of communications when transmitting classified information.

If you have any additional questions about telephone usage as it relates to national security, contact Bob Amott on Ext. 3933.

obituaries

PAUL BLINN of Maintenance, Plant 44, died March 7 at the age of 64. He had been with the company since 1965 and resided at 55 Cypress St., Central Islip.

JUNIOR MURRELL MCCLELLAN OF Production, Plant 88, died March 9 at the age of 48. He worked for Grumman since 1965 and resided at 3185 Lynn Court, Newbury Park, California.

CLEMENT F. CIARAMELLA of Templates, Plant 2, died March 14 at the age of 34. He had been with the company since 1978 and resided at 27 Spruce St., Farmingdale.

DARRELL POOLE of Maintenance, Plt. 12, died March 17 at the age of 53. He had been with the company since 1954 and resided at 5 Suggs Lane, Hicksville.

Personals

We wish to thank our many friends and co-workers at Grumman for their thoughtfulness during our recent loss. **The Allgood Family**

My family and I wish to thank our friends, co-workers, and Employee Services for their kindness and sympathy during the recent loss of my father. **Kurt German**

On behalf of my family and myself I wish to thank our many friends, co-workers and Employee Services for their kindness and sympathy during the recent loss of my father. **Paul Knoph**

My family and I would like to express our sincere appreciation to all my friends and co-workers for their kind expression of sympathy during the recent loss of my brother. **Eileen Joseph**

We wish to thank our many friends and co-workers for their kind expressions of sympathy at a time when it was deeply appreciated. **The Lemp Family**

My family and I wish to express our sincere appreciation to our many friends, co-workers and Employee Services for their kind expressions of sympathy during the recent loss of my son. **Stanley Michalowski**

We wish to express our deep gratitude to our friends and co-workers at Grumman for their kindness and thoughtfulness during out time of sorrow. **The Sax Family**

I wish to thank my friends and Employee Services for their kindness and sympathy during the recent loss of my mother. **John Barnes**

My family and I wish to thank our many friends and co-workers for their kind expression of sympathy during our recent loss. **Marie Holmes**

My family and I wish to thank our many friends at Grumman for their kindness and sympathy during our recent loss. **James Kearney**

Have questions about EIP? Now's time to submit them

For the fourth consecutive year, representatives of the Fiduciary Trust Company will meet with interested participants of the Grumman Employee Investment Plan (EIP). All active EIP members are invited. The gathering will meet in the Plant 30 cafeteria at 5 p.m. on Thursday, May 3.

Fiduciary representatives will discuss their investment philosophy and examine some of the market indicators that influence their investment decisions.

Representatives from Bankers Trust Company and Aetna will also be present at the annual gathering.

During the meeting, attendees may ask questions about the Investment Plan. So a maximum number of inquiries can be answered in the allotted time, the Employee Investment Plan office suggests that Grummanites who have certain topics they wish to be discussed fill out the form below, and mail it to: Employee Investment Plan, AO3-28.

According to Kay Trestka, administrator for the Plan, the meeting is scheduled to begin at 5 p.m. so that a majority of those wishing to attend could do so on their own time. Persons who find it impossible to attend will be able to follow what occurs at the meeting through a summary printed in PLANE NEWS.

Investment Plan

I'd like to have the following topic discussed: _____

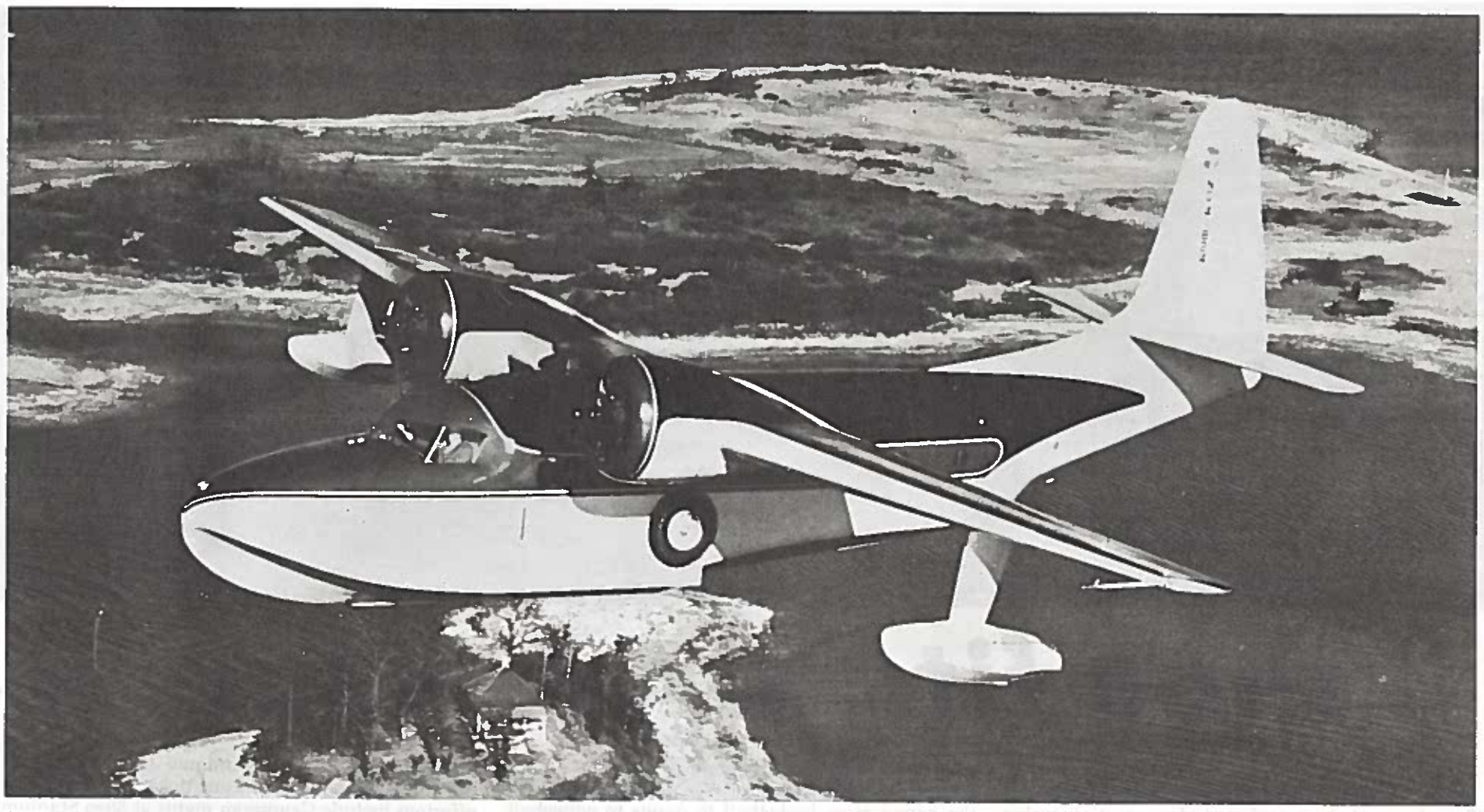
_____

_____

_____

_____

Mail to: A03-28



SUN	MON	TUE	WED	THU	FRI	SAT
1	**2**	**3** 1936: J2F-1 first flight/delivery	**4** 1944: F6F-5 first flight/delivery 1969: EA-6B first flight	**5**	**6**	**7**
8 1937: Plant 1 opens	**9**	**10**	**11**	**12**	**13** 1959: YOA-1 first flight	**14** 1941: XF4F-4 first flight 1959: YOA first delivery
15 1942: First company to receive Navy E for outstanding wartime effort. 1953: F9F-7 first delivery	**16**	**17** 1934: JF-1 first flight 1970: KA-6B first flight	**18**	**19** 1960: A2F-1/A6A first flight/delivery	**20** 1953: F9F-7 first flight	**21** 1942: Port Washington plant opens
22	**23**	**24** 1933: FF-1 first production delivery accepted 1933: XJF-1 first flight	**25**	**26** 1964: A2F/EA-6A first flight	**27**	**28**
29 1944: F6F-5 first delivery 1944: F7F-1 first delivery	**30** 1946: G-73 first flight					

ABOVE PHOTO

G-73 Mallard. Twin-engine private and commercial amphibian transport with capacity to hold 10 to 12 passengers. First delivery 9/27/46; last 5/4/51. Total production: 59.

April

If shoe fits, GAA wears it

By this time, you're probably sick and tired of talking — and complaining — about inflation. It doesn't seem to be creeping any longer; it's jumping in leaps and bounds.

Just look at the purchasing power of the dollar today. You can buy 1.2 gallons of gasoline...or a head of lettuce and a cucumber...or a round-trip ride on the subway.

But there is one good buy that amazingly hasn't been bit by the inflation bug -- an entry ticket into the wide, wide world of the Grumman Athletic Association.

GAA hasn't raised its membership price since 1947. You're probably saying "What's the catch? They've probably cut back on their services over the years, right."

It isn't so. Over the years, GAA has expanded and improved its network of clubs and sports...and the future looks even brighter.

This year, the GAA is holding its annual membership drive from Monday, April 2 through Monday, April 30. Last year, over 92 percent of the Grumman team took advantage of this inflation-defying deal.

Whatever you get out of the meager membership fee is pretty much up to you. There are scores of activities for both your mind and body...however the spirit moves you. The GAA offers something for everyone.

For recreation, pleasure and diversion during your lunch break, you may participate in any of the following activities: archery, bocce, checkers, chess, handball, horseshoes, quoits, shuffleboard, softball, table tennis, volleyball and weightlifting.

Bowling is one of the most popular after-hours sports with more than 1,500 participants playing in 31 GAA-sanctioned leagues. GAA also sponsors clinics for beginners and experienced bowlers alike to enhance enjoyment in the sport and improve their game.

Golf enthusiasts display their form in 47 leagues with more than 1,300 Grummanites teeing off on 11 courses. The annual kicker's tourney is a big drawing card with contestants coming from every part of the company to vie for the many trophies and honors, or to simply enjoy the thrill of competition.

All membership monies go directly to the support of clubs listed on the next page and sports that run the gamut from basketball to quoits to volleyball. Mike Cherry, who is once again conducting the GAA membership drive, reminds all Grummanites that no varsity sports are supported by GAA membership funds. Varsity soccer, golf, basketball, tennis and bowling are sponsored by corporate donations.

If your sport isn't being played or your activity is not listed, contact the GAA staff — they'll help you do something about it.

For instance, Art Gibson and some of his buddies wanted to form a hockey club last year. They contacted Chet Baumgartner, head of GAA, and he helped them set up an organizational meeting to see how many Grummanites were interested in forming a club team. The result: the Grumman Hockey Club is now taking on other local clubs this season, such as the New York City Firefighters.

Racketball enthusiasts are following the same route to GAA-sanctioned status this season. If you want assistance in setting up a new club or sport activity, GAA is willing and waiting to advise you on how to get started, who to contact, and they will even arrange for facilities and help coordinate the activities of any group.

Perhaps your department wants to sponsor its own table tennis tourney or bocce contest. The GAA will assist you in setting up the event and also lend you the equipment necessary to pull it off.

Sporting success

The GAA storage closet is chock-full of chess and checker games, bocce sets, bats and balls, volleyballs and quoits. Depending on the supply available, it's yours for the asking.

In fact, you can even borrow equipment for your family barbeque. GAA will loan you a volleyball net and ball...quoits...or bocce sets, whatever you need to make your weekend a sporting success.

Many of GAA's programs are also available for your family members and friends. For instance, your sons and daughters can join you in learning karate. The Grumman Karate Club along with many other GAA-sanctioned clubs are open to Grummanites and their families.

All members of the Grumman family can take advantage of GAA's discount ticket program. Past offerings include Grumman nights at Shea Stadium to see the N.Y. Arrows professional indoor soccer team, and the N.Y. Islanders hockery team at the Nassau Coliseum. and, there is also the annual pilgrimage to West Point for Army football.

If travel is your pleasure, GAA has a treasure chest full of programs to satisfy the wanderlust in most people. With competitive prices and top-drawer accommodations, it offers trips to such places as Ireland, the Caribbean, and Hawaii.

Once again, the GAA is open for suggestions. This season, after finding out that many GAA golf leagues get a jump on the season by travelling south, GAA arranged a special golf weekend trip package to South Carolina.

Besides sports and club activities, the GAA organizes and presents shows each year that highlight individual talents. Art, photography and hobby shows keep Grummanite creative talents sharp while people with green thumbs are challenged by spring, rose and fall garden shows.

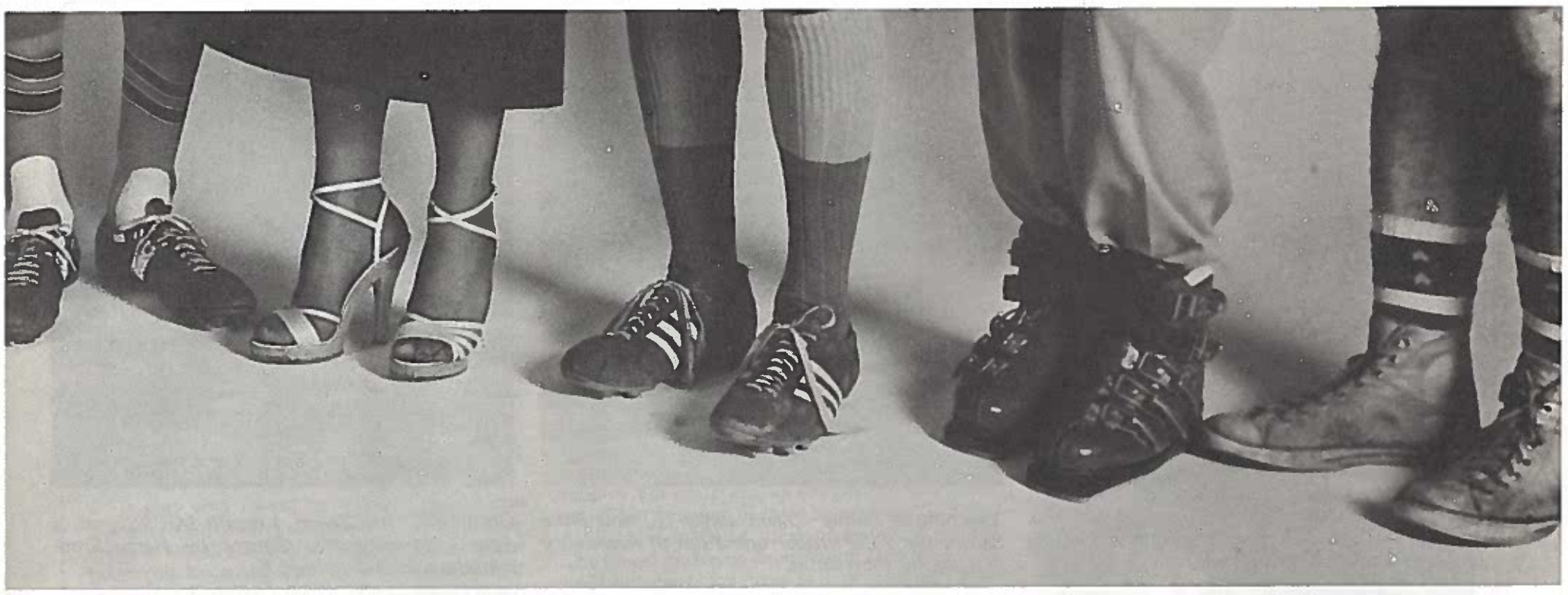
Your membership dollar also entitles your to a drawing for prizes. Fifteen lucky ticket holders will win $100 U.S. Savings Bonds while 50 more will take home a set of Grumman glasses.

To be eligible for the drawing, buy a $1 ticket. Then sign your name, department, and telephone extension on your ticket stub and return it to your department administrator. The drawing will be held Friday, May 4. Results will be published in PLANE NEWS and announced over the PA system.

Remember the annual drive starts Monday and ends April 30. Your support is needed...your participation in any of the GAA activities is welcomed.

If you are not approached by someone in your department to purchase a ticket, ask your supervisor for one of the membership cards. And if you can't get any action in your home department, call the GAA staff — Chet Baumgartner, Mike Cherry, Ellen Drasser and Herb Mahoney — on Ext. 2133 or 2269 — they'll be glad to personally sell you a card.

Though the GAA team isn't telling how they do it, they've obviously discovered how to stretch the buck a long, long way. Why not pass the buck to GAA, right away?



GAA's network of clubs

Clubs	Contact
Aikido Mail sta. C27-01	Bob Bauman Ext. 2945
Amateur Radio Mail sta. A07-25	Ray Schubnel Ext. 3732
Coin (Bethpage) Mail sta. C27-05	Ken Hale Ext. 3717
Coin (Calverton) Mail sta. B28-07	Jerry Kreussling Ext. 117-6844
Duplicate Bridge Mail sta. C02-04	Sam Campbell Ext. 4039
Fencing Mail sta. B31-02	Pete Chaldaria Ext. 4331
Folk Dancing (Calverton) Mail sta. A25-06	Emil Urcivoli Ext. 117-6688
GACE Flying Mail sta. D16-40	Hal Smith Ext. 115-3434
Grumman Cycle Mailsta. A05-35	George Hilton Ext. 3262
Grumman Family Campers Mail sta. A34-03	Charles Holzler Ext. 3585
Grumman garden Forum Mail sta. B40-35	Dot Kappenberg Ext. 5465
Grumman Hockey	Art Gibson Ext. 5783
Grumman Horticultural Mail sta. A21-43	Roy Goddard Ext. 113-7914
Karate Mail sta. A03-15	Tony Ortiz Ext. 4764
Krystal Kracker C.B. Mail sta. A32-02	Harvis Keahey Ext. 2614
Model Aviation Society Mail sta. A07-35	George Meyers Ext. 2864
Model Railroad Mail sta. B09-40	Ray Muntz Ext. 6044
Pocket Billiards Mail sta. A04-30	John DeMarco Ext. 5188
Rod and Gun Mail sta. 000-19	George Capua Ext. 2095
Scuba Divers Mail sta. B28-35	Bill Toolan Ext. 4078
Ski Mail sta. B06-02	Art Garmendia Ext. 7819
Table Tennis Mail sta. C27-01	Frank Malone Ext. 5203
Tennis Mail sta. B25-05	Pat Andrews Ext. 7345
Toastmasters Mail sta. C06-25	James Hopkins Ext. 5318
Wing Nutz R.C. Mail sta. B28-07	John Sullivan Ext. 117-7427
Bowling Mail sta. A01-GAA	Herb Mahoney Ext. 2133
Basketball (men) Mail sta. B03-25	Tony Razziano Ext. 6866
Golf (men) Mail sta. A01-GAA	Mike Cherry Ext. 2269
Softball (men) Mail sta. B08-25	Jack Keane Ext. 7595
Softball (women)	Ken Kretchman Ext. 5708
Soccer Mail sta. A03-40	Otto Stanaitis Ext. 115-3761
Tennis (men) Mail sta. C40-05	Andy Kaufmann Ext. 6240

Lifetime member

A little known fact about GAA is that upon retirement from Grumman, you become a life-long GAA member. Your membership entitles you to participate in all of the GAA activities, including travel and special event programs.

In addition, you receive a monthly GAA retiree newsletter that will keep you informed about upcoming events.

Approximately 3,000 Grummanities are members of the Grumman Retiree Club. Since it was established in 1967, the club has expanded to five chapter. Here's a listing of the club presidents and their addresses:

Long Island-Bert Sternfield, 54 Garden Street, Garden City, N.Y. 11530. Telephone: (516) 248-3839 Treasure Coast (Florida): Rolf Sommer, 90 Village Green, Vero Beach, Florida 32960. Telephone: (305) 562-4769.

Midwest Florida: Vincent Scheer, 241 W. Gardenia Drive, Orange City, Florida 32763. Telephone: (904) 775-2836.

Suncoast Florida: Al Goetz, 308 Fairmount Drive Holiday Lake Estates, Florida 33590. Telephone: (813) 937-6795.

Savannah, Georgia: Jack Clarkson, 459 Mall Blvd., No. 25, Savannah, Georgia 31406. Telephone: (912) 352-7367.

If you are interested in forming a Grumman Retiree Club chapter, call Ellen Drasser, (516) 575-2133, or write to: GAA, Grumman Aerospace Corporation, Bethpage, N.Y. 11714.

Hands-on experience. *Jim Doyle, in his final year in BOCES, will take the FAA's licensing exam for powerplant mechanic.*

Learning by doing. *David Johns (L) and Mike Santos learn the proper operation of machinery in a regular shop setup.*

On the job. *Bill Zeiser, a recent BOCES grad, is now a Grummanite. (Photos by Harry Prodromides and Bob Settles)*

'BOCES...is giving me a good head start'

Mike Santos is only 17 years old but he already knows his way around an airplane. He can rivet wing skins, do control rigging, and troubleshoot an altimeter. He's also got the next six years of his life — and his career — pretty well planned.

Mike is a student in the Board of Cooperative Educational Services (BOCES) School for Aircraft Maintenance, located on Grumman property on South Oyster Bay Road in back of Plant 2. When he graduates in June, he'll be eligible to take the Federal Aviation Administration's licensing exam for powerplant mechanic.

Hands-on experience

Students in the program attend regular classes in their own high schools for part of the day, and spend the rest of the day at the BOCES facility. Some of their BOCES hours are spent in the classroom, but an important feature of the program is actual hands-on experience, working on real airplanes, putting classroom theory to practical use. For the first year of the three-year program, the courses are general aircraft maintenance. By the second year students must select their area of concentration: either powerplant, which is engine work; or airframe, which deals with the exterior structure of an airplane.

"I think it's an excellent program," says Mike. "People come out of here and they know something ... they're employable. With the job market the way it is today, it's pretty hard to find something when you finish a regular high school course. You have to have a skill to offer a potential employer."

Mike wants to be an airline pilot. After his graduation, he plans to work as a mechanic for a while and then go on to college for aeronautics. "Then I'll probably go into the service for more flying experience." (He's already got a private pilot's license.) "I think I've had this all figured out since I was about 10 years old," Mike says. "My father is a pilot, so I've been around airplanes all my life ... it's the only thing I've ever wanted to do. I think the BOCES program is giving me a good head start."

Bill Zeiser has good things to say about the BOCES program, too. Bill, a manufacturing engineer in Plant 2, graduated from the school in 1973. He came to work at Grumman in 1974 as a tooling machinist.

"The training I received in BOCES has definitely held me in good stead in my work here. Right from the start, I felt that I knew what they were talking about ... I didn't come in to the job cold."

Bill became a manufacturing engineer in 1978 after four years in various shop areas. "In the meantime, I've been working toward my associate's degree in mechanical engineering. When I become interested in a new part of my work, I like to take a course that will develop that interest. My experience in BOCES taught me that — that whenever possible, work and education should complement one another."

"In general, we've had great luck with the BOCES graduates we've hired," says Charlie Pfaeffle of Grumman Aerospace employment. "Unfortunately, we haven't taken very many of them on from the Aircraft Maintenance program, since hiring in manufacturing areas started tapering off at about the time the school opened.

"I guess, over the years, we've hired about 150-200 graduates from various BOCES programs; air conditioning and refrigeration, electricity, building maintenance, auto repair," says Pfaeffle. "They seem to be acclimated to the world of work. They don't come in here and act surprised that riveting is a tough, noisy job ... they know what it's like because they've already done it.

"A few years ago," Pfaeffle recalls, "we held an open house here for BOCES students. Our foremen who came to talk to them were not all that enthusiastic about hiring any of them. Some of the kids were a little scruffy looking, I guess — long hair and jeans and all that — and the foremen agreed rather reluctantly to take them on.

"Well, six months later they called us back to tell us that the BOCES kids were terrific; they worked hard, learned quickly, and did a great job. I think the school teaches them to take work seriously."

Jim Doyle, another student in the Aircraft Maintenance program, agrees with that assessment.

"You've got to know right from the start what you want to do in this program. Some kids come in here and they can't deal with the freedom of working independently. They think that BOCES will be a good place to goof off. Those kids don't last very long. There's a lot to learn and you really have to keep at it if you're going to complete the course successfully."

Another student from the Aircraft Maintenance program observes, "How could you not know that they mean business here? It doesn't even look all that much like school ... and we're right in Grumman's backyard."

(For more information, call the Board of Cooperative Educational Services, Occupational Education Division: (516) 997-8700.)

Good vibes

A nine-month long Space Shuttle ground vibration testing program was completed successfully last month at NASA's Marshall Space Flight Center, Huntsville, Alabama.

All of the Shuttle elements -- the orbiter, external tank and solid rocket boosters -- were assembled in the Marshall dynamics test stand in the test program which began in May 1978.

In all, three basic test configurations of the Shuttle were set up to match conditions during the various phases of actual flight.

The orbiter Enterprise which has Grumman-built wings arrived in Huntsville early in 1978 after flight approach and landing tests in California.

The Enterprise was first mated in the test tower with an external tank, the unit which supplies liquid propellants to the orbiter's three main engines. This linkup provided data about the high-altitude portion of a Shuttle flight.

For the second phase of testing, the tank and Enterprise were removed from the stand and solid rocket boosters, filled with inert propellant, were stacked inside the tower. The tank and Enterprise were put back into position for the first mating of a complete Space Shuttle. This configuration provided data about the liftoff portion of a flight.

The third and final condition was obtained by removing all elements from the stand again and replacing them exactly as they were, but with the solid rocket boosters empty. This simulated the point in a Shuttle flight, some 43.5 kilometers (27 miles) high, just before the recoverable boosters separate to parachute back into the ocean.

people

Nothing is certain except death and taxes goes the old saying, but these days you can add a third certainty — complaining about taxes. Hearing some of those complaints is a job taken on by Grummanite Carl Locker who serves as chairman of the Riverhead Board of Assessment Review.

Carl Locker

The third Tuesday of July is Grievance Day in Riverhead and the three members of the review board sit all day and listen to the unhappy taxpayers who are questioning their assessments, or the amount of taxes they have to pay.

"It gets very trying by the last hour," says Locker. "People are yelling at you all day. They come in and think you made the assessment. The tax revolt has made people take notice of their tax bills. Of course years ago there wasn't much money involved. They feel they've got to yell at somebody and we're available for that one day."

Despite the yelling Locker makes an effort to stay calm. "You take a deep breath before answering them. If you just yell back, it doesn't help the situation. Then you both look foolish." He sometimes worries about the state of health of some of the taxpayers. "Some are very emotional," he says. "They get red in the face and you have to start worrying about their blood pressure. We had to send one man out for a cup of coffee last year because he came in so upset."

The biggest problem for the board of review is not the anger of the taxpayers but the lack of information needed to review each case. "The law assumes the assessor is correct," says Locker. "It is up to the taxpayer to present proof that the assessor is wrong. You can't just walk in and say, 'I'm paying too much taxes.' You have to give the board something to work with, some proof, some documentation."

The most difficult situation faced by Locker and his colleagues are cases where "people just come in and say they can't afford to pay the taxes, particularly the retired people. They don't argue about the assessed evaluation of the house. They just can't afford the taxes. Unfortunately there isn't a thing we can do in those cases."

Last year was a banner year for tax protests. A total of 390 taxpayers, up 150 percent over 1977, asked for a review of their assessments in Riverhead. About 104 of them protested in person. The board makes no decisions on Grievance Day itself but meets for three to four hours on subsequent evenings until all of the cases are decided. "Unfortunately all of this work comes in the summer when you'd rather be doing things with your family," says Locker. "Instead you spend your nights at the review board."

But it's not all hard work he admits. "I enjoy it," he says. "You get to meet a lot of people and you get a good insight into what is going on in the town."

Locker, who has worked at Grumman for almost 20 years and is currently administrator for Flight Test Technology at Calverton, is a native of the Riverhead area and has lived in his Jamesport house since 1949. "When we moved in the taxes were $49. Now they are crowding $1,000," he says.

Reviewing the tax assessments of his neighbors means making hard decisions, he says, "but somebody has got to do it. I guess I am as qualified as the next guy to give you an honest shake."

Better late than never. *ATCS Ken Mayer is congratulated by Capt. Norio Endo (R) Naval Plant Representative at Bethpage, after receiving a plaque commemorating his 2,000 flight hour in the E-2 Hawkeye. Also present at the ceremony on March 2 was Cdr. Bill Mooberry, a former commanding officer of Mayer's. Chief Mayer belatedly received his 1,000 hour plaque as well during the ceremony. He somehow missed getting it in 1974 because he was busy serving in Vietnam. I didn't know I was going to get the 1,000 hour plaque too, says Mayer. I thought it was lost forever. They really surprised me. (Photo by Rich Breunig.)*

'Best speaker'

Frank Bonino of Configuration/Data Management recently gave a presentation on "The Use of Inquiry/IMS at Grumman Aerospace Corporation" to the Inquiry/IMS Users Group meeting in Orlando, Florida. At the conclusion of the two-day conference, Frank was voted the "Best Speaker."

New appointments

Among those who recently received changes in assignments were: CORPORATE QUALITY AND SAFETY OPERATIONS — Alfred Wirth, supervisor, Supplier Control, Pl. 30; DEPARTMENTAL OPERATIONS — Frank Fitzgerald, principal engineer, System Design, Pl. 14; Gilbert Friedenreich, manager, System Development and Integration, Pl. 35; Robert Green, project engineer, Electronic/Electrical Engineering, E-2 Program, Pl. 1; William Schooley, acting engineering manager, Nacelle & Thrust Reverser Program, Pl. 40; Frank Milordi, project leader, TAWDS and RGWS, Pl. 7; John Mooney, technical specialist, Advanced Sensor Technology, Pl. 14; James Murphy, engineering manager, M161 Hydrofoil Program, Pl. 40; Steven Rocamboli, team leader, Electronics Laboratory, Pl. 14; FIELD OPERATIONS — Alfred Schaefer, logistics manager, NAS Miramar, Pl. 80; GREAT RIVER OPERATIONS — George Faeth, deputy director, Manufacturing; MATERIAL MANAGEMENT — Alfred Larsen, manager, Corporate Material Handling Systems.

Watch the birdie. *The Well Diggers Experimental Theater Company"s acting troupe pose for a family portrait. Grumman's Jerry Mellman is third from left in the back row.*

To the Big Apple

After eight months of performing all over Long Island with a local theater group, Grummanite Jerry Mellman has almost made it to Broadway — Broadway and 18th St. anyway. On April 1 Mellman, a member of the Well Diggers Experimental Theatre. Company, will be opening at the Newfoundland theater at 6 West 18 St. for a nine week run of two plays, "Such Tunes as Killed the Cow" and "Different Ends of the Rainbow."

By day Mellman is a technical specialist in the Systems Design area for the EA-6B at Calverton, but at night it's the actor's life for him. He joined the Well Diggers last August but he has been performing with other theater groups in St. James and Port Jefferson over the past seven years.

The Well Diggers are an all-male group based at the State University of New York at Stony Brook. Their plays are original pieces based on their own experiences as males in American society. The material originates in workshops run by the group and is polished for the stage. Mellman describes working with the Well Diggers as "challenging" because "you are helping to create a completely new work."

He is looking forward to a new challenge — the opening of the production in Manhattan. "Playing in New York will help the Well Diggers establish professional credentials," he says "It's what every theater group wants."

Centerstage. *Board members of the Bethpage Federal Credit report the latest news of the Credit Union to shareholders at the Westbury Music Fair. (Photo by Gerry Costello)*

Means to an end

A computer demonstration of the End Item Definition System (EIDS) was held on March 13 for Larry Mead, Senior Vice President-Departmental Operations and Tom Kelly, Vice President-Engineering. EIDS will define all of the drawings and parts used in building an end item – the deliverable end product.

Using EIDS, engineers will process parts list information for engineering drawings and drawing changes. The data will then be available quickly and accurately to other departments needing the information, such as manufacturing, procurement, inventory or planning. Once the data is in EIDS, it can be used by the other departments almost immediately, through any of almost 200 terminals throughout the company.

Acceptance testing of EIDS will begin on April 1 and a pilot production by the Integrated Logistic Support (ILS) department will be started on July 1.

EIDS will reduce delay in transmitting information from one department to another and eliminate transcription errors. By providing more accurate and timely materials data, EIDS will lead eventually to improved inventory methods, with small hardware loss due to overaged parts, and a reduction in warehouse space.

Computer demonstration. *Watching EIDS in action are (L to R) foreground: Tom Kelly, Vice President-Engineering, and Larry Mead, Senior Vice President – Departmental Operations; background; George Olsen ILS: Rudy Wiehl, EIDS project manager; and Tom Gentile of EIDS at the keyboard. (Photo by Marie Trimborn)*

It's not unusual to hear good news from BFCU

Tom Jones, an energetic and talented entertainer, supplied a dynamite show for attendees at the Bethpage Federal Credit Union's annual meeting on Wednesday, March 21, at the Westbury Music Fair.

Before the audience enjoyed Jones' performance they applauded the opening act — the annual reporting of their Credit Union's performance.

Said Jim Roberts, BFCU president, "1978 was another year of growth for Bethpage Federal Credit Union, a year in which members' equity increased $6.3-million — a modest 6.7 percent over 1977. The slow-down in growth can be attributed primarily to the inflationary conditions of our economy."

Last year the Credit Union continued its trend of offering more services for its 36,000 members. "The year was only four days old when we opened our newest branch office in Melville -- serving approximately 1,200 members at this location." says Pete Seitz, CU manager.

"Added to our list of major services in June was a full range of long-term opportunities called 'Term Savings Accounts.' These provide a wide choice of rates and maturities on shares over $1,000," continued Seitz. "Our sincere interest in sound personal financial planning, budgeting, and use of credit led us to appoint our first financial counselor ..."

Seitz also pointed out other new services such as Vacation Savings Accounts, a discount buying service, and weekend discount auto sales.

During 1978, the Credit Union made 17,873 loans to members for a total of approximately $40-million. "This volume helped raise our loan-to-share ratio to 74.6 percent, a significant increase over last year's 64.4 percent," reported John Komst, chairman of the Credit Committee.

This kind of support of the BFU's borrowing programs made it possible to expand the loan services in many ways, said Komst. "Notably we raised our home improvement loan ceiling from $10,000 to $15,000. Compare that with the Credit Union's pre-1977 ceiling of $7.500, and you'll have an indication of the dramatic progress we have made in the area of loan capabilities, and will continue to make in the future."

The Credit Union is also anticipating enthusiastic response to the recently introduced Youth Savings and Loan Program. Open to young members between 13 and 17 years of age, this program establishes certain amounts which individuals within each age group may borrow. Loan payments are encouraged to be slightly higher than necessary to repay the note; the additional funds are deposited in the young member's share account.

If you are interested in finding out more about the BFCU services offered, call one of its branch offices: Bethpage, Ext. 6577; Calverton, Ext. 6800; Great River, Ext. 7969; Melville, Ext. 3355; Savannah, Ext. 3137; and Stuart, Ext. 249.

calendar

IEEE Reliability Chapter: Tues., Apr. 17, 8 p.m., Polytech. Institute of N.Y., Farmingdale; guest speaker: Lt. Col. Kenneth D. Wilkinson, U.S. Air Force; guests welcome. Joe Drvostep, Ext. (115) 3530.

Scuba Divers Club: Wed., Apr. 11, 7 p.m., Chateau Restaurant, Bagatelle Rd.; local meeting; guests welcome. Al Andreiev, Ext. 5537.

Ski Club: Wed., Apr. 11, 8:30 p.m., Hillside Restaurant, Plainview; local meeting; guests welcome. Art Garmendia, Ext. 7819/8910.

Society of Logistics Engineers: Tues., Apr. 24, 9 a.m.-4 p.m., Adelphi University, Garden City; Fourth Annual L.I. Chapter Logistics Symposium; guests welcome. Arnie Pinker, Ext. 8880.

Society of Manufacturing Engineers: Mon., Apr. 9, 7:30 p.m., Polytech. Institute, Farmingdale; business and technical meeting; guests welcome. Arnie Pinker, Ext. 8880.

To err is...

It wasn't the computer that switched the service milestone listing of 20 year anniversarians with the 15 year people last issue. It was a human error. We apologize to all those people for the mix-up.

GRUMMAN plane news

Published twice a month for the employees of Grumman Aerospace Corporation, Bethpage N.Y. 11714 as a function of the Public Affairs Dept., Brian Masterson, director.

Editor
Kathy Housley
Ext. 3293

Associate Editors
Gerry Kirshenbaum Ext. 5118
Norine Lyons Ext. 5119

Editorial Assistant
Kristin Lane
Ext. 8999

Plane News from outside line
516-575-3293

scorecard

This year, Great Neck North High School received the Joe Calandro Sportsmanship Award from Long Island District Board No. 41 basketball officials.

It was a toss up on who got the biggest kick out of the award — the basketball coach or Grummanite Joe Calandra.

For the past three years, these sportsmanship trophies have been named in honor of a L.I. referee. It came as no surprise to many that it was Joe's turn this year.

Joe Calandra

A high school official for 17 seasons, Joe retired from the court a few years ago because "I was not performing up to speed. I felt that I couldn't give the kids my all."

An old injury to his hamstring began to take the zip out of the former Grumman Yankee outfielder. "When I refereed, I'd like to be right on top of the game. Some officials stand at midcourt; I could have done that, but it wouldn't be right for the kids -- or me. I got a charge out of being in the middle of the action."

His performance as a high school official has been recognized several times. For seven consecutive years, he officiated the Section 8 Nassau County finals. (An official is picked from high school coach ratings.)

Throughout all those years of reffing and two years as a player on the U.S. Army European championship team, Joe has seen a dramatic change in the hoop game. "The game has picked up speed considerably over the years," reflects Joe. "The crowd could usually follow the action in the earlier days because more emphasis was placed on ball handling and setting up for the shot.

"Today it's a quick 'shoot for the basket and run' game. It's a sport for the big men and the quick break."

Though Joe admits there are many kids nowadays who are superb shooters, he still continues to see the team that has the balanced attack win the championships. "The old saying that 'teamwork pays off' still holds true."

Joe is quick to point out the changes that have taken place over the years in basketball, but trying to get him to talk about Joe Calandra is another game.

Finally after a half hour, Joe commented about the sportsmanship award. "As an athlete, the number one thing for me was being a good sport. After all these years, that's what makes this trophy extra special."

Tomcat trials

The Grumman men's varsity softball team will hold tryouts on the following days: April 17, 19, 24, and 26. If you think you can help the Grumman squad win a championship this year, you must show up at these practices at 4 p.m. at the Plant 3 softball fields. Additional practices will be announced at the trials. For further information, contact Jack Keane, Ext. 7595.

Checkmate

The Grumman Chess Club is sponsoring a chess championship. All Grummanites and those with Grumman subcontractor badges are invited to enter. The tourney will be held on alternate Friday evenings beginning April 6 at 7 p.m. in the Plant 30 cafeteria.

The tournament will run under the Swiss system, with six to 10 rounds depending upon the number of entrants. If you wish to enter, contact Ken Marley, Ext. 4901.

On the range

The Grumman Equestrian Club is now planning its agenda for the upcoming season. All riders — beginners and advanced — are welcome to participate. For further information, contact Jim Borzell, Ext. 4371.

Women's golf

According to Pauline Pearson, league president, there are a few slots open in the 1979 Grumman Women's Golf league. For further information, call Pearson, Ext. 8677.

On guard. *Every Monday afternoon at 4:30 the Grumman Fencing Club offers instructions to all interested. Contact Peter Chaldaris, Ext. 4331, for information. (Photo by Rich Breunig)*

King of the hoopsters. *For the second year in a row, the Grumman varsity basketball team captured the Long Island Industrial league title. Those who enjoyed an undefeated season are (L to R) front row:Tony Razziano, Ron Knight, Nate Kelly, Larry Bates, Paul Knoph, Rich Washington; second row: Rich Brown, Gene Cromwell, Larry Tarvin; top row: Garry Flynn Haywood Hammond. Not pictured: Jim McKinstry. (Photo by Marie Trimborn)*

what do you think?

How important is television to you? Would you climb the walls without it or do you see it as a waste of time? We asked some Grummanites what they would do if someone came up to them and offered them $500 to live without television for one whole month.

Bill English

Yes, I certainly would. I see nothing monumental about giving up television for a month. I know my son wouldn't-...there's no possible way. When you think about it, I guess it would be no effort. TV has been part of everyone's life for over 20 years and we've been conditioned by it. But for $500? I've got some bills I could clear up with $500!

Margaret McCarthy

I wouldn't mind. Actually, I don't have the time to watch that much TV anyway. I get up at 5 A.M. and leave for my job at 6 A.M. and I'm busy in the evenings quite a bit. There are things I enjoy watching, such as documentaries and the news, and they're showing "Upstairs, Downstairs" again and that's very good. I think if I were at home a bit more, I'd find it hard to give television up. But right now, it wouldn't bother me at all.

Marian Stange

I could give up television for a month with ease. I don't know about the rest of my family...but for $500, I'd tell them they're on their own! I have three sons, but only two of them are living home; they're 18 and 23, and I think they'd have a hard time giving up TV. But I'm involved in amateur theater in Huntington, and with choral groups and things like that. So if someone wanted to pay me to give up television, I'd do it with pleasure. I'm not home anyway.

Richard Lucas

It's hard to say. My grandkids enjoy TV; it's on from the time they come home from school until I come home and turn it off. I want them to get their homework done, and I don't approve of all the television they watch. But I don't know if I'd want to give it up altogether. The news is very important to me. I traveled all over when I was in the Navy ... to Russia, China, the North Pole, the South Pole, and all over Africa ... and I want to know what's going on in the world. Television is good for keeping you informed. But I've been around for 62 years, and I think TV gazing is a waste of time in some instances.

Frank Farina

Yes, I'd give up my television set. I think TV has eliminated family life. Families aren't close anymore; they don't do things together, they don't discuss things. They just sit around and stare at the tube. My own family doesn't watch that much anymore...we've cut down on our viewing quite a bit. We've gotten into the habit of playing cards at night or just talking to each other. And anyway, there's not much on television that's worthwhile. It's a waste of valuable time.

Chuck Brester

I would gladly turn off television for a month. My kids are just addicted to it, and I really think their studies suffer as a result. I have a 14-year-old daughter and a nine-year-old son; there are four people in my family and we have four television sets. I just had a row with my daughter yesterday. I've forbidden her to watch TV after school now until her marks go up. As far as I'm concerned, they could take all four sets away and we'd be better off for it.

Evelyn Gerdon

Yes, I'd give up my TV for a month. I don't spend that much time at home that I'd miss it. I'm very interested in sports; my whole family is. We'd rather spend our time doing that. I'm a skater; I like bowling. My daughter was a competitive skater for 10 years and we were very involved in that. We own a horse and we go riding two or three times a week. We have a boat, and we spend a lot of our weekends at Fire Island in the summer. I do like a good movie on TV once in a while, but I could easily live without it.

Good sports. *In case you're trying to identify whose feet are featured in the centerfold of this issue, here are the answers: (L to R) Vic Himale, Dick Waldmann, Linda Hackett, Edgar Mills, Anonymous Person, Ken Johnson, Fran Mazzella, Phil Brown, Pat Chalich and Pete Fales. (Photo by Rich Breunig)*

GRUMMAN plane news

ADDRESS CORRECTION REQUESTED

BULK RATE
POSTAGE PAID
HICKSVILLE, N.Y. 11802
PERMIT NO. 1110

Vol. 38, No. 6, March 30, 1979. Bethpage, N.Y. 11714